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## FAX COVER SHEET

Date: 4/17/98

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**445A.455 Disqualification of director; exception.**

1. The director shall not be a person who receives or has during the previous 2 years received a significant portion of his income, as defined by any applicable state or federal law, directly or indirectly from one or more holders of or applicants for a permit required by NRS 445A.300 to 445A.730, inclusive.

2. The disqualification provided in this section does not apply with respect to significant income received from any department or agency of state government which may be a holder of or an applicant for a permit required by NRS 445A.300 to 445A.730, inclusive.

(Added to NRS by 1973, 1711; A 1975, 1404)-(Substituted in revision for NRS 445.217)

**445A.460 Administrator: Qualifications; disqualification; exception.**

1. The administrator shall be selected with special reference to his training, experience, capacity and interest in the field of environmental protection and ability to administer and direct the work of a public agency.

2. The administrator shall not be a person who receives or has received during the previous 2 years a significant portion of his income, as defined by any applicable state or federal law, directly or indirectly from one or more holders of or applicants for a permit required by NRS 445A.300 to 445A.730, inclusive. The disqualification provided in this subsection does not apply with respect to significant income received from any department or agency of state government which may be a holder of or an applicant for such a permit.

(Added to NRS by 1977, 1141)-(Substituted in revision for NRS 445.219)

→ **445A.465 Injection of fluids through well or discharge of pollutant without permit prohibited.** Except as authorized by a permit issued by the department pursuant to the provisions of NRS 445A.300 to 445A.730, inclusive, and regulations adopted by the commission, it is unlawful for any person to:

1. Discharge from any point source any pollutant into any waters of the state or any treatment works.

2. Inject fluids through a well into any waters of the state.

3. Discharge from a point source a pollutant or inject fluids through a well that could be carried into the waters of the state by any means.

4. Allow a pollutant discharged from a point source or fluids injected through a well to remain in a place where the pollutant or fluids could be carried into the waters of the state by any means.

(Added to NRS by 1973, 1711; A 1985, 765; 1991, 857, 1742, 1743)-(Substituted in revision for NRS 445.221)

**FEDERAL AND OTHER CASES.**

Provision of section were preempted by federal law and could not be enforced against Amtrak's practice of discharging raw human waste into Nevada's rivers and streams. Where trains owned by plaintiff ("Amtrak") were discharging raw human waste from their toilet facilities into Nevada's rivers and streams, state could not enforce provisions of former NRS 445.221 (cf. NRS 445A.465), which makes it unlawful to discharge pollutant into waters of state, against plaintiff because National and Community Service Act of 1990 preempted state and local laws pertaining to disposal of human waste by plaintiff's trains. *National R.R. Passenger Corp. v. State, Dep't of Conservation and Natural Resources*, 776 F. Supp. 528 (D. Nev. 1991)

**ATTORNEY GENERAL'S OPINIONS.**

*Nevada Administrative Code - Water Pollution*  
Action Levels for Contaminated Sites (Corrective Action Regs)

**445A.226 Definitions.** As used in NAC 445A.22605 to 445A.22755, inclusive, unless the context otherwise requires, the words and terms defined in NAC 445A.22605 to 445A.2268, inclusive, have the meanings ascribed to them in those sections.

(Added to NAC by Environmental Comm'n. eff. 10-3-96)

**445A.22605 "Action level" defined.** "Action level" means the level of concentration of a hazardous substance, hazardous waste or a regulated substance in soil, ground water or surface water that is established pursuant to NAC 445A.2272, 445A.22735 and 445A.2275 and for which corrective action may be required by the director.

(Added to NAC by Environmental Comm'n. eff. 10-3-96)

**445A.2261 "Administrator" defined.** "Administrator" means the administrator of the division.

(Added to NAC by Environmental Comm'n. eff. 10-3-96)

**445A.22615 "Aquifer" defined.** "Aquifer" has the meaning ascribed to it in NAC 445A.812.

(Added to NAC by Environmental Comm'n. eff. 10-3-96)

**445A.2262 "Corrective action" defined.** "Corrective action" means a permanent remedy that an owner or operator is required to take after a release of a hazardous substance, hazardous waste or a regulated substance to prevent the substance or waste from posing a threat or potential threat to public health or the environment.

(Added to NAC by Environmental Comm'n. eff. 10-3-96)

**445A.22625 "Director" defined.** "Director" means the director of the state department of conservation and natural resources.

(Added to NAC by Environmental Comm'n. eff. 10-3-96)

**445A.2263 "Division" defined.** "Division" means the division of environmental protection of the state department of conservation and natural resources.

(Added to NAC by Environmental Comm'n. eff. 10-3-96)

**445A.22635 "Ground water" defined.** "Ground water" has the meaning ascribed to it in NAC 444.579.

(Added to NAC by Environmental Comm'n. eff. 10-3-96)

**445A.2264 "Hazardous substance" defined.** "Hazardous substance" has the meaning ascribed to it in NRS 459.429.

(Added to NAC by Environmental Comm'n. eff. 10-3-96)

**445A.22645 "Hazardous waste" defined.** "Hazardous waste" has the meaning ascribed to it in NAC 444.843.

(Added to NAC by Environmental Comm'n. eff. 10-3-96)

**445A.2265 "Operator" defined.** "Operator" means a person in control of or having responsibility for the daily operation of a site, business or other operation where a hazardous substance, hazardous waste or a regulated substance is disposed of, used or stored.

(Added to NAC by Environmental Comm'n, eff. 10-3-96)

**445A.22655 "Owner" defined.** "Owner" means a person who owns property where a hazardous substance, hazardous waste or a regulated substance is disposed of, used or stored.

(Added to NAC by Environmental Comm'n, eff. 10-3-96)

**445A.2266 "Person" defined.** "Person" has the meaning ascribed to it in NRS 445A.390.

(Added to NAC by Environmental Comm'n, eff. 10-3-96)

**445A.22665 "Regulated substance" defined.** "Regulated substance" has the meaning ascribed to it in NRS 459.448.

(Added to NAC by Environmental Comm'n, eff. 10-3-96)

**445A.2267 "Release" defined.** "Release" has the meaning ascribed to it in NAC 445A.345.

(Added to NAC by Environmental Comm'n, eff. 10-3-96)

**445A.22675 "Remediation standard" defined.** "Remediation standard" means the level of concentration of a hazardous substance, hazardous material or a regulated substance in soil, ground water or surface water which corrective action is designed to achieve.

(Added to NAC by Environmental Comm'n, eff. 10-3-96)

**445A.2268 "Surface water" defined.** "Surface water" has the meaning ascribed to it in NAC 445A.513.

(Added to NAC by Environmental Comm'n, eff. 10-3-96)

**445A.22685 Applicability.** The provisions of NAC 445A.226 to 445A.22755, inclusive, apply to any site, business or other operation where corrective action is required, unless the corrective action is required at:

1. A facility for the treatment, storage or disposal of hazardous waste that is issued a permit pursuant to NRS 459.400 to 459.600, inclusive, and the corrective action is required for any violation of NAC 444.8632.

2. A disposal site, as defined in NRS 444.460, and the corrective action is required pursuant to NAC 444.7481 to 444.7499, inclusive.

(Added to NAC by Environmental Comm'n, eff. 10-3-96)

**445A.2269 Assessment of conditions at site of facility after notification of release of pollutant.**

1. Except as otherwise provided in this section, if the owner or operator of a facility, or his designated agent, is required to give notice of a release pursuant to NAC 445A.345 to 445A.348, inclusive, the division shall require the owner or operator to conduct an assessment of the conditions at the site of the facility, including an assessment of the condition of the soil or water, or both, to determine the extent and magnitude of the contamination.

2. The division shall not require an owner or operator to conduct an assessment of the soil required by subsection 1 if the level of contamination of the soil does not

4. The Safe Drinking Water Act (42 U.S.C. §§ 300f et seq.) and 40 C.F.R. Part 141, as those sections exist on October 3, 1996, are hereby adopted by reference. A copy of those sections may be obtained from the United States Government Printing Office, Washington, D.C. 20402, at a cost of \$30.

(Added to NAC by Environmental Comm'n. eff. 10-3-96)

**445A.2274 Contamination of ground water: Remediation standard.** Unless remediation of a release may be terminated pursuant to NAC 445A.22745, the remediation standard for ground water shall be deemed to be the action level of the ground water.

(Added to NAC by Environmental Comm'n. eff. 10-3-96)

**445A.22745 Contamination of ground water: Monitoring; conditions for terminating remediation of release.**

1. After any corrective action required by NAC 445A.22725 is begun, the owner or operator shall ensure that the contaminated ground water is monitored for not less than 1 year to determine the level of contamination in the water. The division shall determine the frequency of the monitoring, but in no case may the division require monitoring more frequently than once each month.

2. After any corrective action required by NAC 445A.22725 is completed, the owner or operator may terminate remediation of the release if:

(a) An assessment of the contaminated ground water is conducted and indicates that the level of contamination is consistently below the action level for that water established pursuant to NAC 445A.22735; or

(b) After the ground water is treated for not less than 1 year, the concentration of dissolved constituents in the water, measured monthly, fits a curve that is substantially linear and approaches zero slope at the final portion of the curve. The curve must be established using the following equation:

$$C = C_f + C_o e^{-kt}$$

Where: "C" means the concentration of the contaminant at "t" in micrograms per liter.

"C<sub>f</sub>" means the final concentration of the contaminant in micrograms per liter which the curve approaches asymptotically.

"C<sub>o</sub>" means the difference between the final concentration of the contaminant and the concentration of the contaminant at time zero in micrograms per liter.

"e" means the base of the natural log or 2.718.

"t" means time measured in days.

"k" means the decay constant.

(Added to NAC by Environmental Comm'n. eff. 10-3-96)

**445A.2275 Contamination of surface water.**

1. The director may require an owner or operator to take corrective action if the release of a hazardous substance, hazardous waste or a regulated substance contaminates surface water and the level of contamination exceeds the action level established for the water pursuant to subsection 2.

2. For the purposes of subsection 1, the action levels and remediation standards for surface water must conform to the standards for water quality set forth in NAC 445A.120, 445A.121, 445A.122 and 445A.144.

3. An owner or operator who is required to take corrective action pursuant to this section shall submit to the division a plan and schedule for completing the corrective action. The owner or operator shall not take any corrective action until the plan and schedule are approved by the division.

(Added to NAC by Environmental Comm'n, eff. 10-3-96)

**445A.22755 Public hearings regarding corrective action affecting more than one owner or operator.** The administrator may hold such hearings as he deems necessary to obtain public testimony regarding any corrective action required to be taken pursuant to NAC 445A.226 to 445A.2275, inclusive, which affects more than one owner or operator or members of the general public.

(Added to NAC by Environmental Comm'n, eff. 10-3-96)

**MEMORANDUM**

**DATE:** August 28, 1997  
**TO:** Doug Zimmerman, Chief, Bureau of Corrective Actions  
**FROM:** Brenda Pohlmann, ES IV, Bureau of Corrective Actions *BP*  
**SUBJECT:** Remediation Action Level for Perchlorate in Groundwater

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The State of Nevada Corrective Action Regulations provide a method to establish action levels for hazardous substances, hazardous wastes and regulated substances in soil, groundwater and surface water. These regulations adopt the definition of a hazardous substance as defined in NRS 459.429 which states: A hazardous substance includes, without limitations, hazardous materials, regulated substances, a pollutant and a contaminant. Pollutant, as per NRS 445A.400, is defined as dredged soil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal and agricultural waste discharged into water. Based on these definitions, perchlorate contamination in groundwater would fall under the purview of the corrective action regulations.

Action levels for the remediation of ground water are established in the following manner: If the USEPA has established a Maximum Contaminant Level (MCL) under the Safe Drinking Water Act for that chemical, then that level is adopted by Nevada as the action level. Currently, USEPA has not established an MCL for perchlorate. Lacking an MCL, then there are two routes for establishing the action level. The first route sets the action level at background which presumably would be ND in this situation.

The second method involves setting an appropriate level of concentration that is protective of public health and safety and the environment as determined by using the IRIS database or an equivalent method. At this point, however, there is no information in the IRIS database on perchlorate.

Therefore, NDEP has two options. One is to accept the establishment of California's 18 ppb level (which was established for drinking water) as protective of public health and safety and therefore equivalent to a value as determined utilizing IRIS. The second option would be to establish background as the cleanup action level.

## Nevada Revised Statutes - Water Pollution

**445A.370 "Interstate agency" defined.** "Interstate agency" means an agency of two or more states:

1. Established by or pursuant to an agreement or compact approved by the Congress of the United States; or
2. Having substantial powers or duties pertaining to the control of pollution of waters.  
(Added to NRS by 1973, 1708)-(Substituted in revision for NRS 445.161)

**445A.375 "Municipality" defined.** "Municipality" means:

1. Any city, town, county, district, association or other public body created by or pursuant to the law of this state and having jurisdiction over disposal of sewage, industrial wastes or other wastes; or
2. An Indian tribe or an authorized Indian tribal organization.  
(Added to NRS by 1973, 1708)-(Substituted in revision for NRS 445.166)

**445A.380 "Package plant for sewage treatment" defined.**

1. "Package plant for sewage treatment" means any plant which:
  - (a) Consists of units or modules designed for construction, assembly, connection and installation at the site for treatment of sewage; and
  - (b) Is privately owned and will be operated to treat waste water and sewage for a limited area.
2. The term does not include a plant for the treatment of domestic sewage whose capacity is less than 5,000 gallons.  
(Added to NRS by 1979, 1912)-(Substituted in revision for NRS 445.168)

**445A.385 "Permit" defined.** "Permit" includes a general permit, individual permit or temporary permit. The term does not include a permit issued pursuant to NRS 445A.615 or 445A.625.

(Added to NRS by 1991, 1741)-(Substituted in revision for NRS 445.169)

**445A.390 "Person" defined.** "Person" includes the United States, to the extent authorized by federal law, the state or any agency or institution thereof, any municipality or other political subdivision of this state or any interstate body.

(Added to NRS by 1973, 1708; A 1985, 516)-(Substituted in revision for NRS 445.171)

**445A.395 "Point source" defined.** "Point source" means any discernible confined and



2. Does not mean water, gas or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil or gas production and disposed of in a well, if the well is used either for facilitating production or for disposal purposes and if the department determines that such injection or disposal will not result in the degradation of ground or surface water resources.

3. Does not mean water, gas or other material injected into a well or used to stimulate a reservoir of geothermal resources if the department determines that the injection or stimulation will not result in the degradation of ground or surface water resources.

(Added to NRS by 1973, 1708; A 1981, 660)-(Substituted in revision for NRS 445.178)

**445A.405 "Pollution" defined.** "Pollution" means the man-made or man-induced alteration of the chemical, physical, biological and radiological integrity of water.

(Added to NRS by 1973, 1709)-(Substituted in revision for NRS 445.181)

**445A.410 "Treatment works" defined.** "Treatment works" means:

1. Any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature, including intercepting sewers, outfall sewers, sewage collection systems, pumping, power and other equipment, and their appurtenances;

2. Extensions, improvements, remodeling, additions, and alterations of any device or system mentioned in subsection 1;

3. Units essential to provide a reliable recycled supply such as stand-by treatment units and clear well facilities;

4. Any works, including site acquisition of the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment; and

5. Any other method or system for preventing, abating, reducing, storing, treating, separating or disposing of municipal waste, including storm water runoff, industrial waste or waste in combined storm water and sanitary sewer systems.

(Added to NRS by 1973, 1709)-(Substituted in revision for NRS 445.186)

**445A.415 "Waters of the state" defined.** "Waters of the state" means all waters situated wholly or partly within or bordering upon this state, including but not limited to:

1. All streams, lakes, ponds, impounding reservoirs, marshes, water courses, waterways, wells, springs, irrigation systems and drainage systems; and

2. All bodies or accumulations of water, surface and underground, natural or artificial.

(Added to NRS by 1973, 1709)-(Substituted in revision for NRS 445.191)

**445A.420 "Water quality standard" defined.** "Water quality standard" means the degree of pollution of water or the physical, chemical or biological condition of water, as expressed numerically or descriptively, used for controlling the quality of water in each segment of a stream and each other body of surface water in this state.

(Added to NRS by 1973, 1709; A 1979, 1027)-(Substituted in revision for NRS 445.196)

**445A.425 Powers and duties of commission.**

1. Except as specifically provided in NRS 445A.625 to 445A.645, inclusive, the commission shall:

*Nevada Administrative Code - Water Pollution* 445A.400

**445A.101 "Pollutant" defined.** "Pollutant" has the meaning ascribed to it in NRS 445.178. [Environmental Comm'n, Water Pollution Control Reg. §§ 1.27-1.27.2, eff. 5-2-78; A 1-25-79]--(Substituted in revision for NAC 445.099)

**445A.102 "Pollution" defined.** "Pollution" has the meaning ascribed to it in NRS 445.181. [Environmental Comm'n, Water Pollution Control Reg. § 1.28, eff. 5-2-78; A 1-25-79]--(Substituted in revision for NAC 445.100)

**445A.103 "Pretreatment program" defined.** "Pretreatment program" means the general pretreatment regulations for existing and new sources of pollution as set forth in 40 C.F.R. §§ 403 et seq. [Environmental Comm'n, Water Pollution Control Reg. § 1.43, eff. 10-26-79]--(Substituted in revision for NAC 445.101)

**445A.104 "Pretreatment standards" defined.** "Pretreatment standards" means the standards promulgated under section 307(b) of the Act. [Environmental Comm'n, Water Pollution Control Reg. § 1.29, eff. 5-2-78; A 1-25-79]--(Substituted in revision for NAC 445.102)

**445A.105 "Refuse Act application" defined.** "Refuse Act application" means the application for a permit under section 13 of the River and Harbor Act of March 3, 1899. [Environmental Comm'n, Water Pollution Control Reg. § 1.30, eff. 5-2-78; A 1-25-79]--(Substituted in revision for NAC 445.103)

**445A.106 "Regional Administrator" defined.** "Regional Administrator" means the regional administrator of the United States Environmental Protection Agency, Region IX. [Environmental Comm'n, Water Pollution Control Reg. § 1.31, eff. 5-2-78; A 1-25-79]--(Substituted in revision for NAC 445.104)

**445A.107 "Sewage" defined.**

1. "Sewage" means the water-carried human or animal waste from residences, buildings, industrial establishments, feedlots or other places, together with such ground water infiltration and surface water as may be present.

2. The term includes the mixture of sewage with wastes or industrial wastes.